

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Rakesh K. Parimi

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Examiner: Maskulinski, Michael C.

Title: AUTOMATED TESTING SYSTEM,
METHOD AND PROGRAM
PRODUCT USING TESTING MAP

Docket No.: FIS920030422US1
(IBMF-0046)

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Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

BRIEF OF APPELLANT

This is an appeal from the Final Rejection (Office Action) dated May 21, 2007, rejecting claims 1-20. The requisite fee set forth in 37 C.F.R. §1.17 (c) was submitted on August 21, 2007.

REAL PARTY IN INTEREST

International Business Machines Corporation is the real party in interest.

RELATED APPEALS AND INTERFERENCES

There is no related appeal or interference.

STATUS OF CLAIMS

As filed, this case included claims 1-20. Claims 1-20 remain pending, stand rejected, and form the basis of this appeal. No claim has been allowed. The rejections of claims 1-20 are being appealed.

STATUS OF AMENDMENTS

After-final amendments of claims were proposed following the Final Rejection of May 21, 2007, which were not entered as allegedly introducing new matter.

SUMMARY OF THE CLAIMED SUBJECT MATTER

Independent claim 1 provides a method for performing automatic testing of a system (10) including a plurality of modules (12) in which at least two modules lack a predetermined communication mechanism (Para. 0021), the method comprising the steps of: establishing at least one test goal (see Para. 0037 for the definition of test goal) for testing regarding at least one of a module and an interface point (14) between modules (Para. 0043); providing at least one test script (see Para. 0036 for the definition of test script) configured to conduct a test at each module and each interface point (Para. 0043); generating a test map (see Para. 0032 for the definition of test map) for each test goal, each test map configured to run at least one test script for each module and each interface point in accordance with the test goal (Para. 0046); and automatically testing the system using each test map (Para. 0051).

Independent claim 9 provides a computer program product (32, Para. 0026 and Para. 0064) comprising a computer useable medium (22) having computer readable

program code embodied therein for performing automatic testing of a system (10) including a plurality of modules (12) in which at least two modules lack a predetermined communication mechanism (Para. 0021), the program product comprising: program code which, when executed by a computer system, is configured to enable the computer system to establish at least one test goal (see Para. 0037 for the definition of test goal) for testing regarding at least one of a module (12) and an interface point (14) between modules, wherein at least one test script (see Para. 0036 for the definition of test script) configured to conduct a test is provided at each module and each interface point (FIG. 2; Para. 0043); program code which, when executed by a computer system, is configured to enable the computer system to generate a test map (see Para. 0032 for the definition of test map) for each test goal, each test map configured to run at least one test script for each module and each interface point in accordance with the test goal (Para. 0046); and program code which, when executed by a computer system, is configured to enable the computer system to automatically test the system using each test map (Para. 0051).

Independent claim 14 provides a system (See FIG. 2 for the system) for performing automatic testing of a system (10) including a plurality of modules (12) in which at least two modules lack a predetermined communication mechanism (Para. 0021), the system comprising: means (user 36) for establishing at least one test goal (38) (see Para. 0037 for the definition of test goal) for testing regarding at least one of a module and an interface point between modules (Para. 0043), wherein at least one test script (180) (see Para. 0036 for the definition of test script) configured to conduct a test is provided at each module (12) and each interface point (14) (see FIG. 2); means (102)

for generating a test map (see Para. 0032 for the definition of test map) for each test goal, each test map configured to run at least one test script for each module and each interface point in accordance with the test goal 9Para. 0046); and means (104) for automatically testing the system using each test map Para. 0051).

GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

1. Whether claims 9-13 are directed to non-statutory subject matter under 35 U.S.C. 101.
2. Whether claims 1-20 are anticipated by Farchi et al. (US Pub. No. 2003/0046613), hereinafter “Farchi”, under 35 U.S.C. 102(b).

ARGUMENTS

1. Claims 9-13 are statutory under 35 U.S.C. 101.

The Examiner alleges that claims 9-13 are not limited to tangible embodiments because the computer useable medium in claim 9 includes an “intangible embodiment”, e.g., transmission media. Appellant respectfully disagrees with this assertion. A transmission media, e.g., a carrier signal, is recognized as a physical carrier.

Arrhythmia Research Tech. v. Corazonix Corp., 958 F.2d 1053, 1059 (Fed. Cir. 1992).

Note that the electro-magnetic waves used to represent signals are physical existing, no matter whether the waves are viewable/ touchable or not. In addition, a carrier signal modulated with computer program codes that cause a computer system to perform a

process has been ruled as statutory subject matter. *In re Berauregard*, 53 F.3d 1583 (Fed. Cir. 1995). As such, claims 9-13 are directed to statutory subject matter.

In the Office Action, the Examiner asserted that the current invention does not disclose that a transmission media is a carrier signal. Appellant respectfully disagrees because a carrier signal is a way of transmitting data and is thus included as a transmission media. A carrier signal is the only example of a transmission media that may be confused as intangible. To this extent, Appellant had requested the Examiner to provide an example of a transmission media that is asserted as “intangible” and is not a carrier signal (See the After-Final Amendment of 7/23/07 at page 8), and the Examiner failed to do so. Further Appellant had requested the Examiner to specify how he interprets a transmission media as intangible (See *Id.*), and the Examiner also failed to do so.

In the Office Action, the Examiner also requested Appellant to clarify where in the specification it is stated that the transmission media is a carrier signal modulated with computer program code. Appellant respectfully submits again herein that in the specification, the transmission media is an example of memory 22 which stores program product 32. (See, e.g., paragraphs 26-27 and FIG. 2.) If the transmission media is specified (as an example) as a carrier signal, the carrier signal will be modulated with program product 32. Appellant submits that the mechanisms of data storage in a memory, data transmission, and data modulation in transmission/a carrier signal are well known in the art such that the current specification is sufficient to provide antecedent basis for the claims, e.g., claim 9. In view of the foregoing, the claimed “computer useable medium” includes a carrier signal and is tangible.

In view of the foregoing, claims 9-13 are directed to statutory subject matter, and Appellant respectfully requests the board reverse the rejection under 35 U.S.C. 101.

2. Claims 1-20 are not anticipated by Farchi under 35 U.S.C. § 102(b).

With respect to independent claims 1, 9 and 14, Appellant submits that Farchi does not disclose, *inter alia*, “providing at least one test script configured to conduct a test at each module and each interface point[.]” (Claim 1, similarly claimed in claims 9 and 14). Farchi only discloses creating a test suite comprising test cases, i.e., “individual programs which carry out the tasks to be accomplished as identified by the coverage criteria.” (Para. 0003). Farchi does not include providing at least one test script to conduct a test at each module and each interface point. Farchi is related to measuring test coverage but never goes to the details of the software system to be tested. As such, Farchi does not disclose that the system to be tested includes a module and/or an interface point, and does not disclose at least one test script for each module and/or interface point.

In the Office Action, the Examiner asserts that Farchi discloses the above feature by disclosing testing a client program for opening a connection to a server. Appellant respectfully disagrees because the Farchi disclosure at paragraph 0012 only discloses a coverage criteria of a testing, i.e., whether to test all four methods or less than all four methods for opening a connection. Farchi does not disclose the details of the claimed invention, e.g., at least one test script to conduct a test at each module and each interface point. For example, Farchi does not disclose a module and an interface point.

In addition, Farchi does not disclose, *inter alia*, “generating a test map for each test goal, each test map configured to run at least one test script for each module and each interface point in accordance with the test goal[.]” (Claim 1, similarly claimed in claims 9 and 14). The test suite in Farchi includes test cases to achieve test tasks. However, Farchi does not disclose a sequence of the running of the test cases. In contrast, “a ‘test map’ (in the claimed invention) is a sequence of stored test cases to be run in sequence for each module and interface point in accordance with a test goal.” (Current application at Para. 0032, parenthetical explanation added). The above specifically provided definition of “test map” controls the interpretation thereof. As such, Farchi does not include a test map as in the claimed invention. Appellant submits that the assertions of the Examiner regarding creating test cases and revising test cases (Office Action at page 3, section (c)) are irrelevant to this feature of the claimed invention because they are not related to a test map, because they are not a sequence of stored test cases to be run in sequence. In view of the foregoing, Appellant submits that Farchi does not anticipate the claimed invention.

The dependent claims are believed allowable for the same reasons stated above, as well as for their own additional features.

In view of the foregoing, the rejection under 35 U.S.C. 102(b) is defective and Appellant respectfully requests the board reverse the rejection.

In view of the foregoing, Appellant submits that the final rejection is defective, and should be reversed.

Respectfully submitted,

/Michael F. Hoffman/

Michael F. Hoffman
Reg. No. 40,019

Dated: November 21, 2007

Hoffman, Warnick & D'Alessandro LLC
75 State Street 14th Floor
Albany, NY 12207
Telephone: (518) 449-0044
Fax: (518) 449-0047

CLAIMS APPENDIX

1. A method for performing automatic testing of a system including a plurality of modules in which at least two modules lack a predetermined communication mechanism, the method comprising the steps of:

establishing at least one test goal for testing regarding at least one of a module and an interface point between modules;

providing at least one test script configured to conduct a test at each module and each interface point;

generating a test map for each test goal, each test map configured to run at least one test script for each module and each interface point in accordance with the test goal; and

automatically testing the system using each test map.

2. The method of claim 1, further comprising the step of scoring a test result for at least one of the test goal and each test script.

3. The method of claim 2, wherein a test script is included in a test map only if the test script has a score that is greater than a threshold score.

4. The method of claim 2, wherein the generating step includes generating a test map for a given test goal only if the given test goal has a score that is greater than a threshold score.

5. The method of claim 1, further comprising the step of recording a test result for each test script.
6. The method of claim 1, further comprising the step of recording each test map.
7. The method of claim 1, further comprising the step of repeating the steps of generating and automatically testing after correction of a failure.
8. The method of claim 1, further comprising the step of modifying the test map based on a modeling rule.
9. A computer program product comprising a computer useable medium having computer readable program code embodied therein for performing automatic testing of a system including a plurality of modules in which at least two modules lack a predetermined communication mechanism, the program product comprising:
 - program code which, when executed by a computer system, is configured to enable the computer system to establish at least one test goal for testing regarding at least one of a module and an interface point between modules, wherein at least one test script configured to conduct a test is provided at each module and each interface point;
 - program code which, when executed by a computer system, is configured to enable the computer system to generate a test map for each test goal, each test map configured to run at least one test script for each module and each interface point in

accordance with the test goal; and

program code which, when executed by a computer system, is configured to enable the computer system to automatically test the system using each test map.

10. The program product of claim 9, further comprising the program code configured to score a test result for at least one of the test goal and each test script.

11. The program product of claim 10, wherein a test script is included in a test map only if the test script has a score that is greater than a threshold score.

12. The program product of claim 10, wherein the generating program code generates a test map for a given test goal only if the given test goal has a score that is greater than a threshold score.

13. The program product of claim 9, further comprising program code configured to modify the test map based on a modeling rule.

14. A system for performing automatic testing of a system including a plurality of modules in which at least two modules lack a predetermined communication mechanism, the system comprising:

means for establishing at least one test goal for testing regarding at least one of a module and an interface point between modules, wherein at least one test script configured to conduct a test is provided at each module and each interface point;

means for generating a test map for each test goal, each test map configured to run at least one test script for each module and each interface point in accordance with the test goal; and

means for automatically testing the system using each test map.

15. The system of claim 14, further comprising means for scoring a test result for at least one of the test goal and each test script.

16. The system of claim 15, wherein a test script is included in a test map only if the test script has a score that is greater than a threshold score.

17. The system of claim 15, wherein the generating means generates a test map for a given test goal only if the given test goal has a score that is greater than a threshold score.

18. The system of claim 14, further comprising means for recording a test result for each test script and each test map.

19. The system of claim 14, further comprising means for repeating the steps of generating and automatically testing after correction of a failure.

20. The system of claim 14, wherein the generating means includes means for modifying the test map based on a modeling rule.

EVIDENCE APPENDIX

There is no evidence submitted.

RELATED PROCEEDINGS APPENDIX

There is no related proceeding.

CERTIFICATE OF SERVICES

There is no other party to this appeal proceeding.